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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/597,919	08/11/2006	Osamu Chikagawa	36856.1458	7894

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EXAMINER	
NORRIS, JEREMY C	

ART UNIT	PAPER NUMBER
2841	

NOTIFICATION DATE	DELIVERY MODE
06/24/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/597,919	CHIKAGAWA ET AL.	
	Examiner	Art Unit	
	Jeremy C. Norris	2841	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *5-27-09*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *9-16* is/are pending in the application.

4a) Of the above claim(s) *12-16* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *9-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11 August 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *8/06,10/07,12/08,5/09*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of group I, claims 9-11, in the reply filed on 9 April 2009 is acknowledged.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 9 is rejected under 35 U.S.C. 102(e) as being anticipated by US 7,350,296 B2 (Ryu).

Ryu discloses, referring primarily to figures 3a-j, a multilayer substrate including a built-in chip-type electronic component comprising: a laminate including a plurality of laminated dielectric layers (1210, 1210', 1310, 1310') in a lamination direction; a chip-type electronic component (1500) disposed in the laminate and having a terminal electrode (1510) ; and a via conductor (1600) disposed in the dielectric layers in the lamination direction; wherein the terminal electrode of the chip-type electronic component is connected to at least one of upper and lower end surfaces of the via conductor, and a connection step is provided in the via conductor (best seen in figure 3j) [claim 9].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ryu in view of US 6,686,665 B1 (Gao) and US 2004/0121897 A1 (Seo).

Ryu discloses the claimed invention as described above except Ryu does not specifically disclose that the dielectric layers are ceramic layers, the laminate is a ceramic laminate including a plurality of the ceramic layers, and the chip-type electronic component includes a ceramic sintered body defining an element body [claim 10]. However, it is well known in the art to comprise dielectric layers of ceramic material as evidenced by Gao (col. 6, lines 35-50). Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to use LTCC as the material for the dielectric in the invention of Ryu as is known in the art and evidenced by Gao. The motivation for doing so would have been to use a material that provides superior performance at high frequencies (Gao, col. 6, lines 35-40). Additionally, Ryu teaches that the chip-type electronic component is a chip capacitor (col. 8, lines 35-40). It is well known in the art to form chip capacitors as sintered ceramic chip capacitors as evidenced by Seo ([0014]). Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to use a sintered ceramic chip capacitor as the chip capacitor in the invention of Ryu as is known in the art and evidenced by Seo. The motivation for doing so would have been to have a chip capacitor with high dielectric quality at high frequencies (Seo [0014]).

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ryu in view of Gao and Seo as applied to claim 10 above, and further in view of US 6,570,469 (Yamada).

The modified invention of Ryu teaches the claimed invention as described above with respect to claim 10 including wherein the ceramic layers are composed of a low-temperature co-fired ceramic material (LTCC material, Gao col. 6, lines 35-50) except modified Ryu does not specifically teach that the via conductor is composed of a conductor material including silver or copper as a main component [claim 11]. Instead, modified Ryu generically teaches that the via conductor comprises conductive paste (Ryu, col. 9, lines 15-20). However, it is well known in the art to comprise conductive paste of silver or copper as evidenced by Yamada (col. 6, lines 60-65). Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to comprise the conductive paste of modified Ryu of silver or copper as is known in the art and evidenced by Yamada. The motivation for doing so would have been to use a material with high electrical conductivity ensuring a reliable electrical connection. Additionally, it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin,* 125 USPQ 416.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeremy C. Norris whose telephone number is (571)272-1932. The examiner can normally be reached on Monday - Thursday, 8:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean A. Reichard can be reached on 571-272-1984. The fax phone

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jeremy C. Norris
Primary Examiner
Art Unit 2841

/Jeremy C. Norris/
Primary Examiner, Art Unit 2841